

### REMARKS

Claims 2-12 and 14-37 are pending in the case, of which claims 22-28, 34 and 37 were withdrawn from consideration. Claims 14-21, 29-33 and 36 are allowed. Claims 2-6, 10-12 and 35 are rejected. Claims 7-9 are objected to but would be allowable if amended to correct for the noted informalities. Reconsideration is respectfully requested.

Applicant would like to thank Examiner Vinh for the telephone conference on September 24, 2003. During the telephone conference, Attorney for Applicant discussed rejected claim 35 and the Ellerson reference. Attorney for Applicant explained to the Examiner that Ellerson in fact does not disclose every limitation of claim 35, as detailed below. The Examiner indicated that upon review of the present submission, the Examiner will withdraw the rejection to claim 35. Furthermore, Attorney for Applicant indicated to the Examiner that the withdrawn device claims 22-28, 34 and 37 will be canceled in the present submission, as presented by the above claim amendment.

### Electron Restrictions/Request for Rejoinder

In the present amendment, withdrawn claims 22-28, 34 and 37 directed to a non-elected invention have been canceled. Applicant's request in the previous office action for the rejoinder of these claims is thus moot.

### 102(b) Rejections

The Examiner has rejected Claims 5, 12 and 35 under 35 U.S.C. §102(b) as being anticipated by Ellerson et al. (US Patent 5,252,179, herein after "Ellerson"). Applicant respectfully traverses the rejection.

Ellerson explains the operation of its etching apparatus as follows:

...a spray of etchant solution 46 is directed at the encapsulant 13 along the sides of chip 11 as shown in FIG. 2...Diaphragm 20 is press-fit into diaphragm holder 30. Fluid channels 22 are small, approximately 5 mil. diameter channels which are wire cut into the outer side surfaces of diaphragm 20. Exit channels 24, are approximately 6 mil diameter channels wire cut into the bottom edge surface of diaphragm 20. Once the encapsulant 13 located at the sides of chip 11 is removed, diaphragm 20 and diaphragm holder 30 can be lowered (as shown in FIG. 3) so that the bottom surface of diaphragm 20 is in contact with the upper surface of substrate 10...FIG. 3 shows the diaphragm 20 in the lowered position. In this position, diaphragm 20 is lowered to enclose chip 11 and make contact to substrate 10. The diaphragm cavity 23 fits over chip 11. As a result of the change in position, the etchant solution flows from fluid receptacle 21 into fluid channels 22,

and is diverted into diaphragm cavity 23. The etchant solution is directed under chip 11 to etch the encapsulating material located between the bottom surface of chip 11 and the top surface of substrate 10. The used etchant solution exits diaphragm cavity 23 through exit channels 24 as shown in FIG. 5. FIG. 4 shows the position of diaphragm 20 in relation to chip 11 and substrate 10. (Ellerson, col. 3, lines 8-38.)

As explained by Ellerson and shown in Figures 4A, 4B and 5, the etchant solution in Ellerson's etching apparatus flows through the fluid channels which are disposed on all four sides of the diaphragm 20 into a cavity 23.

On the other hand, Claim 35 recites in part "positioning the adapter member adjacent the exposed surface of the semiconductor die to form a channel between the exposed surface of the semiconductor die and the adapter member; and flowing an etchant through the channel across the exposed surface from the first edge to the second edge to etch the semiconductor die" (emphasis added). Claim 35 is patentable over Ellerson at least because Ellerson fails to teach or suggest "flowing an etchant through the channel across the exposed surface from the first edge to the second edge to etch the semiconductor die," as recited in Claim 35.

Therefore, Applicant respectfully submits that Claim 35 is in condition for allowance. Claims 2-12, dependent from Claim 35, are also patentable over the cited references at least for the same reasons that Claim 35 is patentable.

#### 103(a) Rejections

The Examiner has rejected Claims 2 and 11 under 35 U.S.C. §103(a) as being anticipated by Ellerson in view of Gigante (U.S. Patent 4,372,803). Applicant respectfully traverses the rejection.

As discussed above, Ellerson does not teach or suggest all the elements of claim 35 from which claims 2 and 11 depend. Gigante does not cure the deficiency of Ellerson. Thus, Ellerson and Gigante, alone or in combination, do not teach or suggest every limitation of claims 2 and 11. Claims 2 and 11 are patentable over the cited references.

The Examiner has rejected Claims 3 and 4 under 35 U.S.C. §103(a) as being anticipated by Ellerson in view of Harris (U.S. Patent 4,359,360). Applicant respectfully traverses the rejection.

As discussed above, Ellerson does not teach or suggest all the elements of Claim 35 from which claims 3 and 4 depend. Harris does not cure the deficiency of Ellerson. Thus,

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Ellerson and Harris, alone or in combination, do not teach or suggest every limitation of claims 3 and 4. Claims 3 and 4 are patentable over the cited references.

The Examiner has rejected Claim 6 under 35 U.S.C. §103(a) as being anticipated by Ellerson in view of Miller (U.S. Patent 5,064,498). Applicant respectfully traverses the rejection.

As discussed above, Ellerson does not teach or suggest all the elements of Claim 35 from which claim 6 depends. Miller does not cure the deficiency of Ellerson. Thus, Ellerson and Miller, alone or in combination, do not teach or suggest every limitation of claim 6. Claim 6 is patentable over the cited references.

The Examiner has rejected Claim 10 under 35 U.S.C. §103(a) as being anticipated by Ellerson in view of Muller (U.S. Patent 5,956,142). Applicant respectfully traverses the rejection.

As discussed above, Ellerson does not teach or suggest all the elements of Claim 35 from which claim 10 depends. Muller does not cure the deficiency of Ellerson. Thus, Ellerson and Muller, alone or in combination, do not teach or suggest every limitation of claim 10. Claim 10 is patentable over the cited references.

#### CONCLUSION

Claims 2-12 and 14-37 are pending in the present application. In the present submission, withdrawn claims 22-28, 34 and 37 have been cancelled. For the reasons stated above, claims 2-12, 14-21, 29-33 and 35-36 are in condition for allowance. Passage of the present application to allowance is respectfully requested.

If the Examiner would like to discuss any aspect of this application, the Examiner is invited to contact the undersigned at (408) 382-0480.

#### Certification of Facsimile Transmission

I hereby certify that this paper is being facsimile transmitted to the U.S. Patent and Trademark Office on the date shown below.



Signature

Oct. 15, 2003

Date

Respectfully submitted,



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